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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,637	02/27/2004	Brian S. Schieck	NVID-P001125	7655

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EXAMINER	
DUONG, KHANH B	

ART UNIT	PAPER NUMBER
2822	

MAIL DATE	DELIVERY MODE
09/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,637	SCHIECK ET AL.	
	Examiner	Art Unit	
	KHANH B. DUONG	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *8-12 and 19-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,13,14 and 18* is/are rejected.

7)☒ Claim(s) *2,6,7 and 15-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 18, 2008 has been entered.

Claims 1-7 and 13-18 remain active, and claims 8-12 and 19-35 remain withdrawn from further consideration as being drawn to a non-elected invention.

Response to Arguments

Applicant's arguments, see pages 12-23 of the request for continued examination, filed August 18, 2008, with respect to the rejection(s) of claim(s) 1-7 and 13-18 under Cheng, Potts and Lin have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Motika et al. (U.S. 5,807,763).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 13, 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Motika et al. (U.S. 5,807,763).

Re claim 1, Motika et al. ("Motika") discloses in FIG. 1 a semiconductor die 102 comprising: a conductive test signal bump 140 for transmitting test signals off of said semiconductor die 102; a test signal redistribution layer trace 134 for communicating said test signals to said conductive test signal bump 140, wherein said test signal redistribution layer trace is included in a redistribution layer (126/132/134/136) and said test signal redistribution trace 134 is disposed such that multiple test signals are accessible at varying degrees of electronic component granularity within said die 102 and along said test signal redistribution layer trace 134, said test signal redistribution layer trace 134 communicatively coupled to said conductive test signal bump 140; and a test probe point 146 for accessing said test signals in said semiconductor die 102 and for electrical coupling to said redistribution layer.

Re claims 3-5, the claims recite the following product-by-process limitations: "accessible by drilling" (claim 3); "a focused ion beam (FIB) pad accessible by focused ion beam drilling and conductive material backfill" (claim 4); and "conductive material backfill" (claim 5). However, these limitations have not been given patentable weight because product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Thus, Motika discloses in FIG. 1 the test probe point 146 comprises a bonding pad 140 which is coupled to said test signal redistribution layer (126/132/134/136).

Re claim 13, Motika expressly discloses a semiconductor device in FIG. 4 comprising: a package substrate 240 for communicating test signals on an external access point 252; wherein said package substrate 240 includes a conductive trace 244 disposed such that multiple test signals (from probes 250) are accessible at varying degrees of electronic component granularity along said conductive trace 244; and a semiconductor die 234 having test probe points accessible by said external access point 252, wherein said semiconductor die 234 is electrically coupled to said package substrate 240.

Re claim 14, Motika expressly discloses in FIG. 4 said package substrate 240 comprises: a first surface with ball grid array; a second surface with conductive contacts for electrically coupling with conductive bumps of said semiconductor die 234; and a trace 244 for electrically coupling one of said conductive contacts to said external access point 252.

Re claim 18, Motika discloses said external access point 252 is accessible by automatic test equipment [see col. 7, lines 29-33].

Allowable Subject Matter

Claims 2, 6, 7 and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Malladi et al. (U.S. 6,472,900) and Liu et al. (U.S. 6,534,853) disclose relevant teachings regarding testing of semiconductor die.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH B. DUONG whose telephone number is (571) 272-1836. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zandra V. Smith/
Supervisory Patent Examiner, Art Unit 2822

KBD